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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,546	07/29/2003	George Zguris	3533-66350	7494

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EXAMINER

BLACKWELL RUDASI, GWENDOLYN A

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,546

Applicant(s)

ZGURIS ET AL.

Examiner

Gwendolyn Blackwell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 22-24 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35 is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-21, 25-34 and 36 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

1. Applicant's oral election dated August 9, 2005 without traverse of Group I is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-3, 5-10, 27, 29, and 31-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1-3, 5-6, and 31-33 contain the limitation "less than about 5 wt% cobalt oxide". The specification and claims as originally filed do not provide for a content of cobalt oxide above 0.1 wt%. (Specification, page 13, 1st paragraph).

Claims 7-10, 27, and 33 contain the limitation "less than about 25 wt% sodium oxide". The specification and claims as originally filed do not provide for a content of sodium oxide above 20 wt%. (Specification, pages 3-4).

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Claim 27 contains the limitation “less than about 1 wt% in the crystalline phase”. The specification and claims as originally filed do not provide for a less than about 1 wt% in the crystalline phase.

Claims 29 and 32-33 contain the limitation that “that a weight percent ratio of cobalt oxide to bismuth oxide of less than about...” The specification and claims as originally filed do not provide for a ratio of weight percent of cobalt oxide to bismuth oxide.

Appropriate action is required.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

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evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 7, 9, 13-14, 18-21, 27, 29, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over United States Patent no. 3,560,177, De Lajarte et al.

Regarding claims 7, 9, and 27

De Lajarte et al disclose a glass fiber composition comprised of 66-73 wt% of silica and 0.2-2 wt% bismuth oxide, (column 2, lines 23-36). The glass composition is taken as being substantially non-crystalline absent an objective showing to the contrary. As Applicant requires less than about 25 wt% sodium oxide, which would incorporate an end point of 27 wt% sodium oxide, (column 2, lines 23-25), meeting the requirements of claims 7, 9, and 27.

As the ranges overlap, it would have also been within the skill of one in the art at the time of invention through routine experimentation to choose those portions of the claimed invention and the prior art, which overlap to create a glass fiber that is physically and chemically stable up to temperatures in the order of 1200 degrees Celsius, (column 1, lines 41-44).

Regarding claims 13-14

Once the glass composition has been transformed into a glass fiber, the glass fiber has can have sodium oxide present in an amount that is equal to or less than about 20 wt% as it is set forth that after fiberization the final product contains no more than trace amounts of alkali which would be less than 20 wt%, (column 2, lines 3-7). In addition, the finished fiber has bismuth

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oxide in an amount ranging between 0.2-3 wt%, (column 2, lines 60-72). The glass fiber is being taken as substantially non-crystalline absent an objective showing to the contrary, meeting the requirements of claims 13-14.

Regarding claims 18-21

When the composition recited in the reference is substantially identical to that of the claims, the claimed properties or function are presumed inherent. *MPEP 2112.01*. Because the prior art exemplifies the applicant's claimed glass composition, the claimed physical properties relating the density, elemental leach rate, and K_{dis} are inherently present in the prior art. Absent an evidentiary showing to the contrary, the addition of the claimed physical properties to the claim language fails to provide a patentable distinction over the prior art of record.

Regarding claims 29 and 33

The ratio of cobalt oxide to bismuth oxide in the glass composition is 2.5, (column 2, lines 36-37), meeting the requirements of claims 29 and 33.

8. Claims 7-10 and 30-33 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over United States Patent no. 5,817,586, Harada et al.

Regarding claims 7 and 9-10

Harada et al disclose a glass composition comprised of 30-60 wt% silica and 0-40 wt% of bismuth oxide and 0-20 total wt% of CaO, (columns 1-2, lines 63-7), meeting the requirements of claims 7 and 9-10.

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As the ranges overlap, it would have also been within the skill of one in the art at the time of invention through routine experimentation to choose those portions of the claimed invention and the prior art that overlap.

Regarding claims 8 and 30-33

The glass composition does not contain cobalt oxide, zirconium oxide, or titanium oxide, meeting the requirements of claims 8 and 30-31. Because cobalt oxide is not present the ratio of cobalt oxide to bismuth oxide would be zero, meeting the requirements of claims 32-33.

9. Claims 1-9, 10-12, and 25-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over International Patent Application Publication no. 95/09131, WO '131.

Regarding claims 7, 9, 25, and 27

WO '131 discloses a glass composition, Example 43, that is essentially free from lead and cadmium that is comprised of 53.71 wt % silica, 2.51 wt% zinc oxide, 8.98 wt% sodium oxide, 1.77 wt% alumina, and 0.71 wt% bismuth oxide, (page 18, Example 43), meeting the requirements of claims 7, 9, 25-26, and 28. Absent an objective showing to the contrary, the glass composition is being taken as substantially non-crystalline, meeting the requirements of claim 27.

Regarding claims 5-6, 8, and 12

Example 43 does not contain titanium oxide, meeting the requirements of claims 4 and 8. The ratio of bismuth oxide and zinc oxide to silica is 0.05846 based upon the wt% in Example 43, meeting the requirements of claim 5. The softening point of the glass is in the region of 450-600 degrees Celsius, (page 9, paragraph 4), meeting the requirements of claims 6 and 12.

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Regarding claims 3, 10-11, 26, 28, and 30-31

The glass composition can have the following components in weight percent: 30-70 silica, 1-25 boron oxide, 0-10 alumina, 0-50 bismuth oxide, 0.1-25 cobalt oxide, 0-20 sodium oxide, one or more of 0-15 MgO or CaO, and 0.1-20 zinc oxide, (page 4), meeting the requirements of claims 3, 10-11, 26, 28, and 30-31.

As the ranges overlap, it would have also been within the skill of one in the art at the time of invention through routine experimentation to choose those portions of the claimed invention and the prior art that overlap to adjust the physical properties desired, (pages 4-7).

Regarding claims 29 and 32-33

In addition to the glass composition set forth above, the ratio of cobalt oxide to bismuth oxide ranges from 0.2-0.5, meeting the requirements of claims 29 and 32-33, (page 4).

Claim Rejections - 35 USC § 102

10. Claim 1, 5-7, 12-15, 17-21, 25, and 27-33 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent no. 4,472,030, Tachibana et al.

Regarding claims 1, 7, 13-15, 25, and 27-28

Tachibana et al disclose an optical glass composition wherein the glass composition can be used to form glass fibers, (column 9, lines 36-38). Example 10 sets forth a glass composition comprised of 55 wt% silica, 0 wt% sodium oxide, 5 wt% zinc oxide, and 6 wt% bismuth oxide, (columns 5-6, Table 1, Example 10). Absent an objective showing to the contrary the glass fiber composition is taken as substantially non-crystalline, meeting the requirements of claims 1, 7, 13-15, 25, and 27-28.

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Regarding claims 5 and 17

The fraction of bismuth oxide and zinc oxide to silica is 0.2 when using the amounts taken from Example 10, meeting the requirements of claims 5 and 17.

Regarding claims 6 and 12

Example 10 lists a yield point of 592 degrees Celsius which is less than the softening point of Applicant's claimed 703 degrees Celsius, meeting the requirements of claims 6 and 12.

Regarding claims 18-21

When the composition recited in the reference is substantially identical to that of the claims, the claimed properties or function are presumed inherent. *MPEP 2112.01*. Because the prior art exemplifies the applicant's claimed glass composition, the claimed physical properties relating the density, elemental leach rate, and K_{dis} are inherently present in the prior art. Absent an evidentiary showing to the contrary, the addition of the claimed physical properties to the claim language fails to provide a patentable distinction over the prior art of record.

Regarding claims 29-33

The glass fiber composition of Example 10 does not contain cobalt oxide, meeting the requirements of claims 29-33.

Allowable Subject Matter

11. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 35 is allowed over the prior art of record. The prior art of record while teaching the general glass fiber composition as set forth in present claim 13, from which

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claim 16 depends, does not teach or suggest the specific glass fiber composition as set forth in claim 16. In addition, the prior art of record does not teach or suggest the bismuth oxide, silica and CaO:MgO wt% ratio of 3:2 composition as set forth in claim 35.

Response to Arguments

12. Applicant's arguments filed November 23, 2005 have been fully considered but they are not persuasive.

13. With regards to Applicant's contention that USPN 3,560,177, De Lajarte is not prior art as the sodium oxide content in the glass composition and the glass fiber composition of De Lajarte is significantly greater than that as recited in amended claims 7 and 13:

This is not persuasive as Applicant has claimed the sodium oxide limitation in amended claim 7 to be "less than about 25%" which would encompass 27 wt% as set forth by DeLajarte due to the "about" language. In addition, De Lajarte specifically sets forth that the glass fiber composition after fiberization contains no more than trace amounts of alkali which would be less than 20 wt%, (column 2, lines 3-7). As to the overlapping ranges, absent a showing of criticality with Applicant's claimed ranges, it would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549. De Lajarte is still relevant prior art and the rejection is maintained over 7, 9, 13-14, 18-21, 27, 29, and 33.

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14. With regards to Applicant's contention that USPN 5,817,586, Harada does not anticipate nor is it obvious over claims 7-10 as Harada teaches crystalline ceramic compositions and not non-crystalline glass compositions:

This is not persuasive as Harada specifically teaches a glass composition that is used in conjunction with other materials, (columns 1-2, lines 63-7). Claims 7-10 are drawn to a broad generic glass. While Applicant may argue that ceramic composition of Harada is crystalline while Applicant's invention is not does not provide patentable weight as Applicant is arguing aspects that are not in claims 7-10. There is nothing in claims 7-10 which would leave one to believe that the glass composition is non-crystalline, as such, Harada remains as relevant prior art and the rejection is maintained over claims 7-10 and 30-33.

15. With regards to Applicant's contention that WO 95/09131, WO '131 does not teach or suggest the glass composition as there are not specific examples of the glass components falling within the range of Applicant's invention:

This is not persuasive as Applicant has claimed the components using the term "about". About provides flexible endpoints so that the endpoint can be plus or minus several numbers. As such, with Applicant claiming a composition that is "about 54 wt%" silica, the WO '131 example having 53.81 wt% silica would fall within the range of Applicant's "about 54 wt%" silica. In addition, while Applicant may also contend that CoO is not present, Applicant has not indicated in all of the claims that CoO has to be present. A limitation of "less than about 5 wt% cobalt oxide" is interpreted as 0 – about 5 wt%. As to the overlapping ranges, absent a showing of criticality with Applicant's claimed ranges, it would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges

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disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness. *In re Malagari*, 182 USPQ 549.

16. Applicant's arguments, see page 10, filed November 23, 2005, with respect to the rejection(s) of claim(s) claims 13-15 and 17 under USPN 3,537,868 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection as set forth above.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gwendolyn Blackwell whose telephone number is (571) 272-1533. The examiner can normally be reached on Monday - Thursday; 6:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gwendolyn Blackwell
Examiner
Art Unit 1775


JENNIFER MCNEIL
PRIMARY EXAMINER
2/2/06